

FIG. 1A (PRIOR ART)

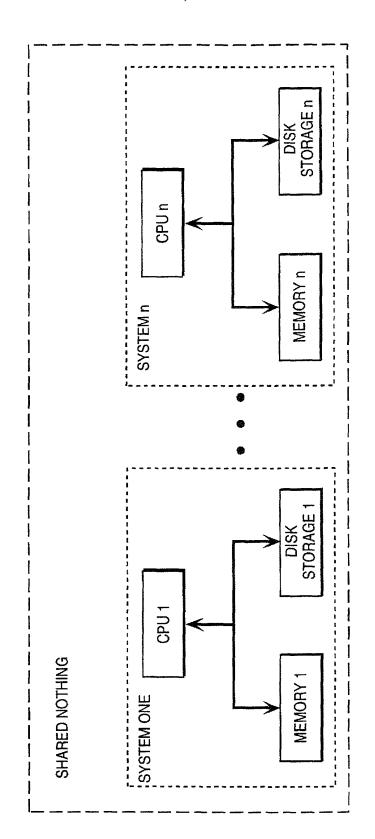


FIG. 1B (PRIOR ART)

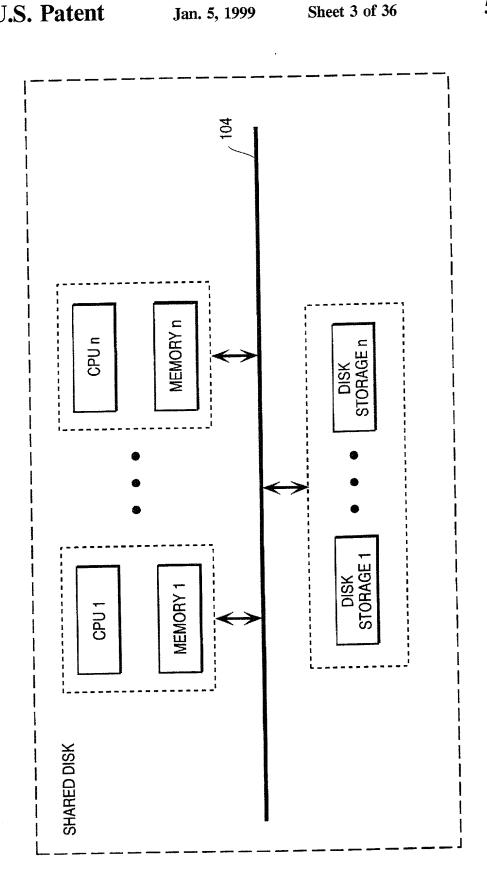


FIG. 1C (PRIOR ART)

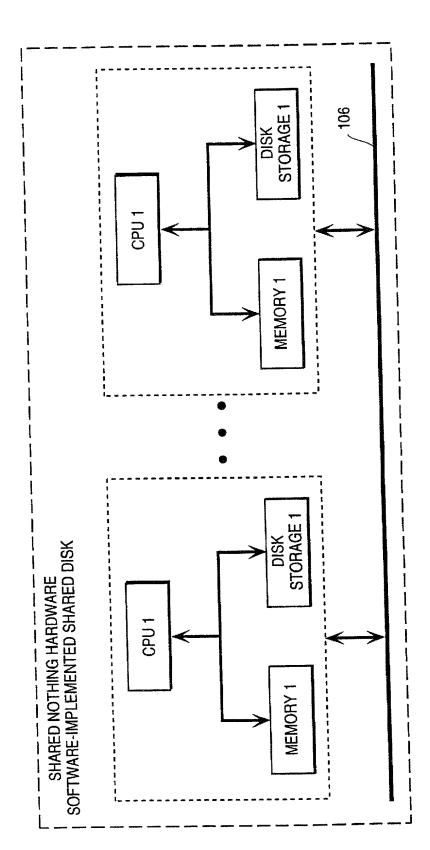
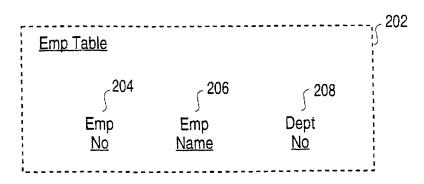


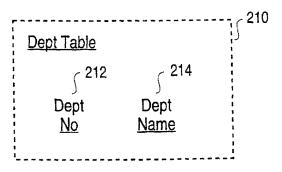
FIG. 1D (PRIOR ART)

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select deptName, empName from empTable, deptTable where empTable.deptNo = deptTable.deptNo order by empName

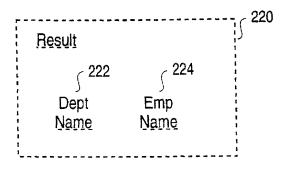


FIG. 2



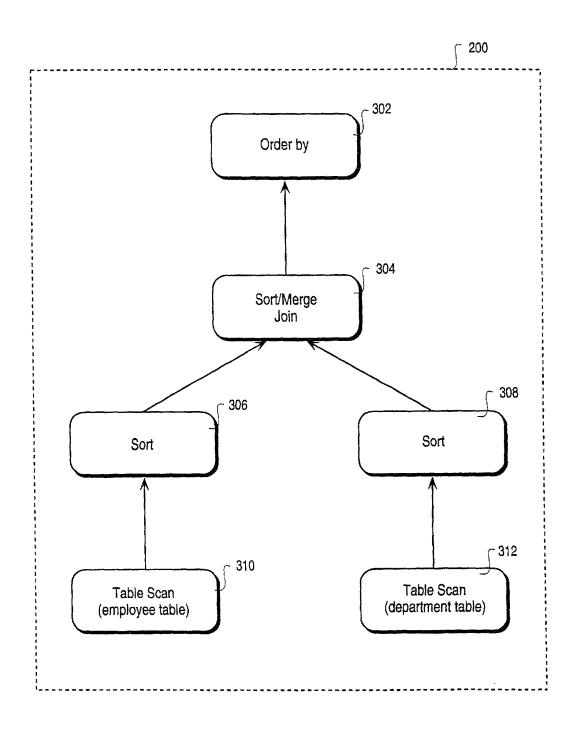


FIG. 3A

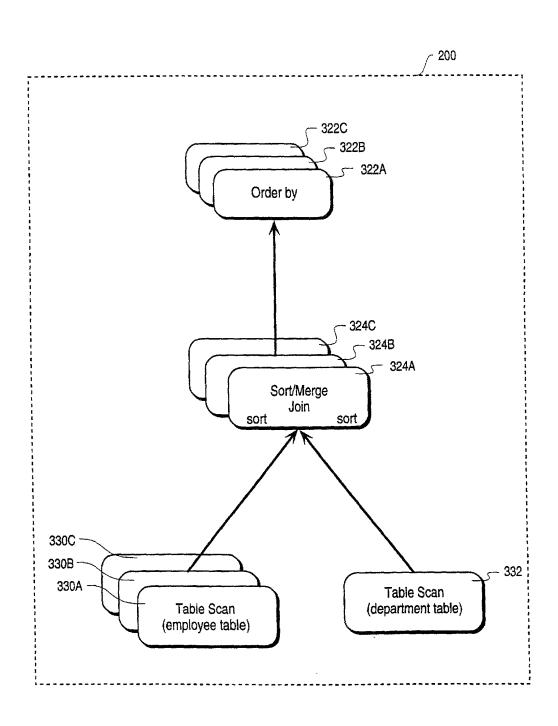


FIG. 3B

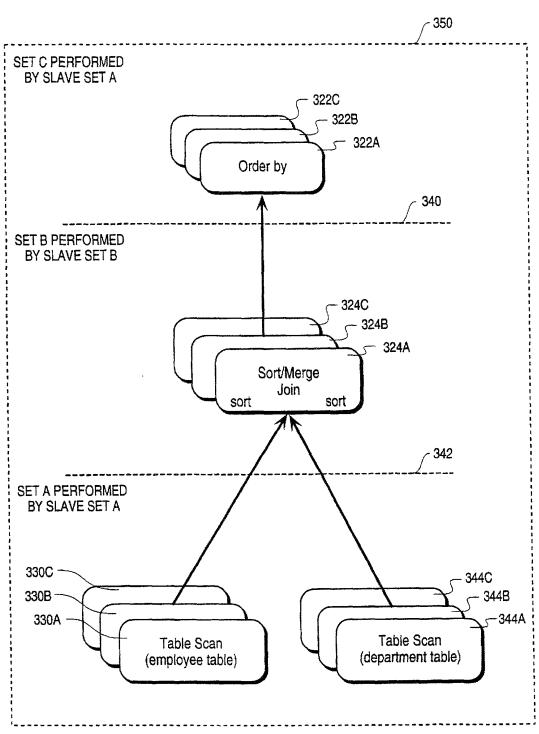


FIG. 3C

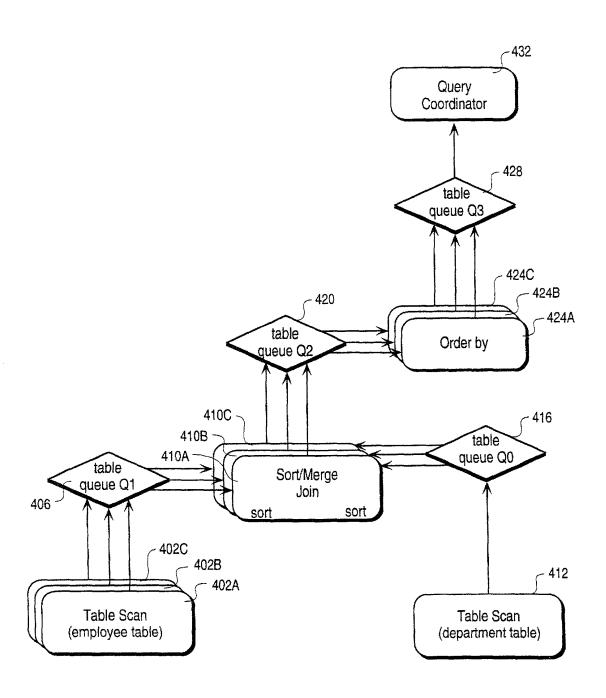
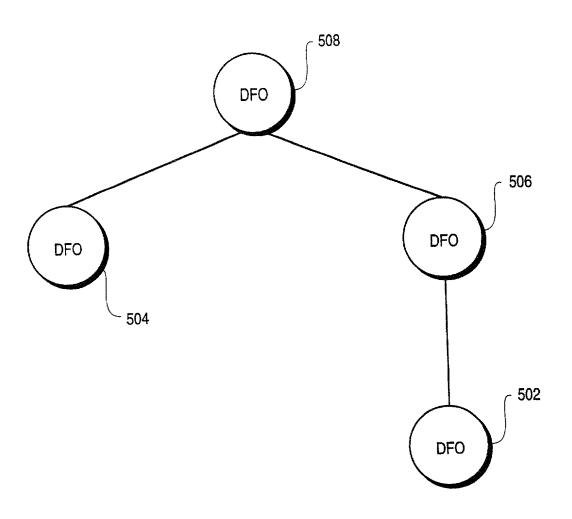


FIG. 4

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**FIG.** 5

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Гуре of DFO (e.g., table scan, sort/merge join) Row source equivilent for this node Pointer to parent node Pointer to next-node

Identifies table node for this queue

Parellelized node's partitioning type (e.g., hash, key range, rowid range, round robin) Number of key columns in input table queue Pointer to first child of parallelized node Number of clumped colums with parent

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Contains information for an indexed nested loop join (e.g., right and left input table) Contains table scan information (e.g., table name and degree of parallelism)

Contains information for index creation (e.g., column list, index type, and storage Contains information for a sort/merge join (e.g., merge or outer join control flags) parameters)

Key Column Number Pointer to First Child Skipped Node Information Non-QC Node Information Table Queue Identifier Pointer to Parent Pointer to Sibling Row Source Operation

Partitioning Type

Indexed Nested Loop Join Clumped Columns Sort/Merge join Index Creation Table Scan Control Blocks

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Pointer to the next DFO to execute Output table queue identifier Number of tables partitioned by rowid Size of the SQL statement representing DFO SQL statement representing DFO

Slave sends "Started" message upon receipt Slave sends "Ready" message when input consumed Slave expects to be closed upon completion

Pointer to Next-to-Execute
Table Queue Identifier
Rowid Table Number
SQL Statement Size
SQL Statement
Flags
Started
Ready
Close

FIG. 6

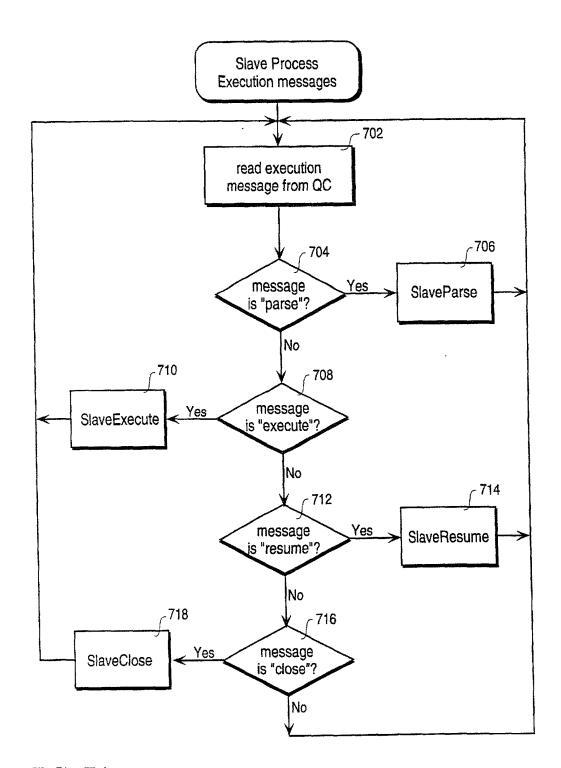


FIG. 7A

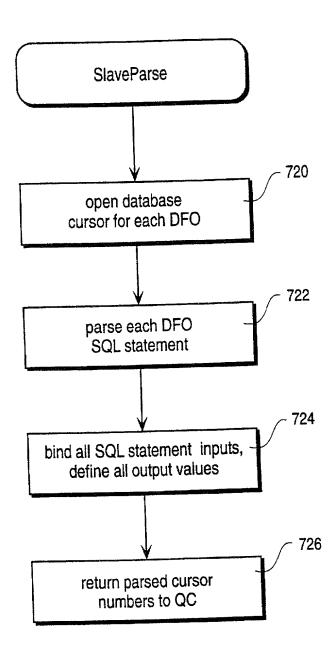


FIG. 7B

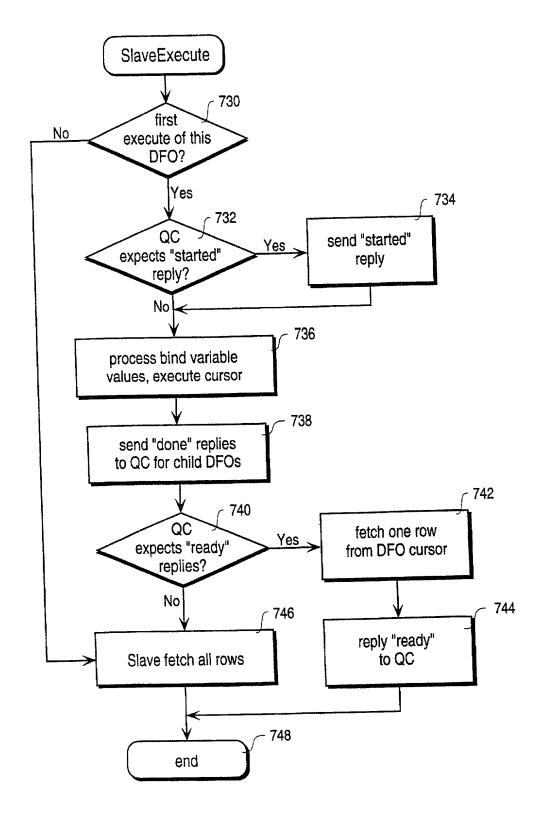
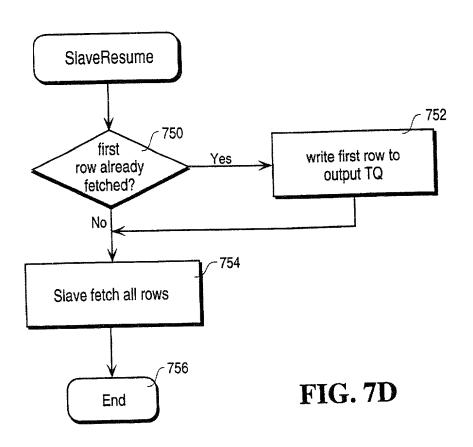


FIG. 7C



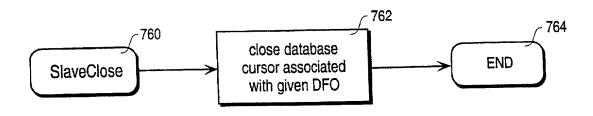
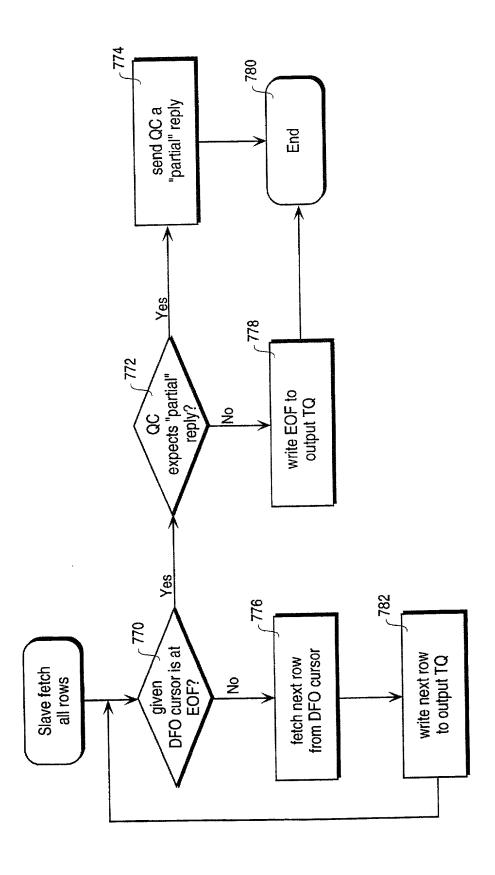
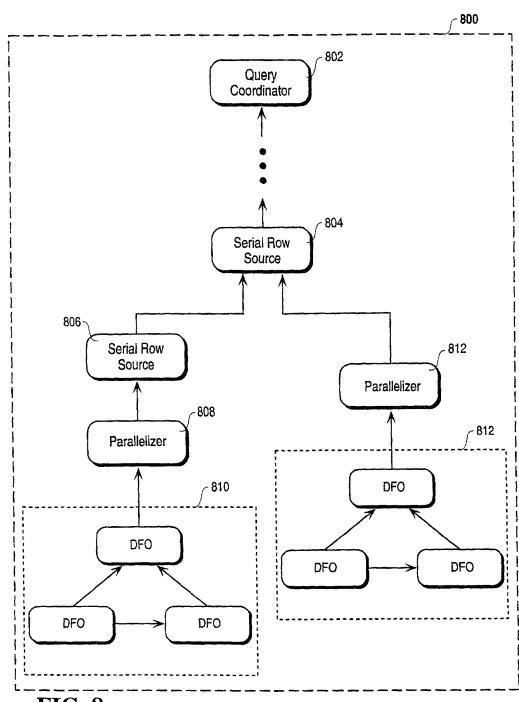


FIG. 7E

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**FIG. 8** 

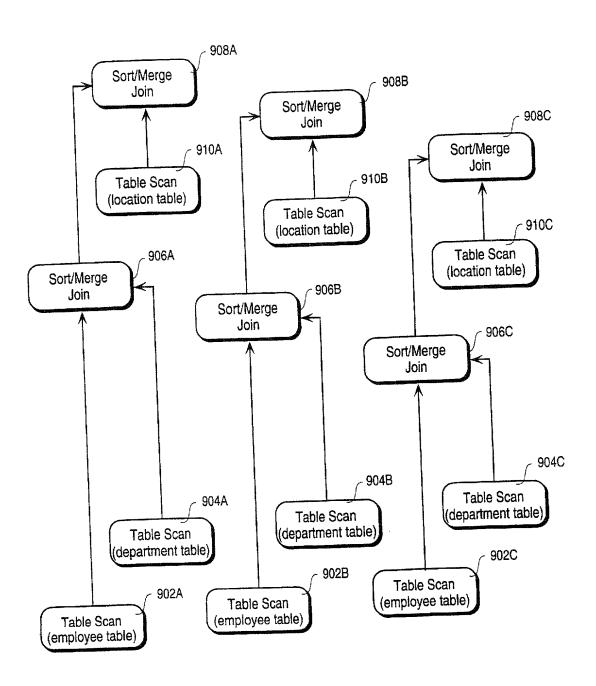
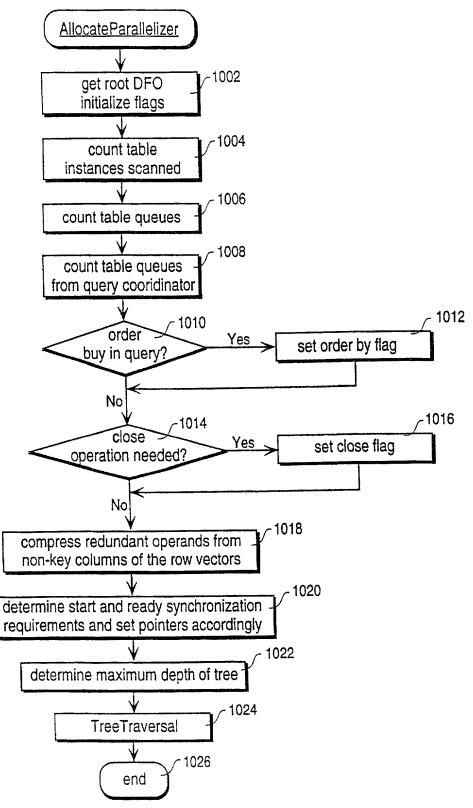


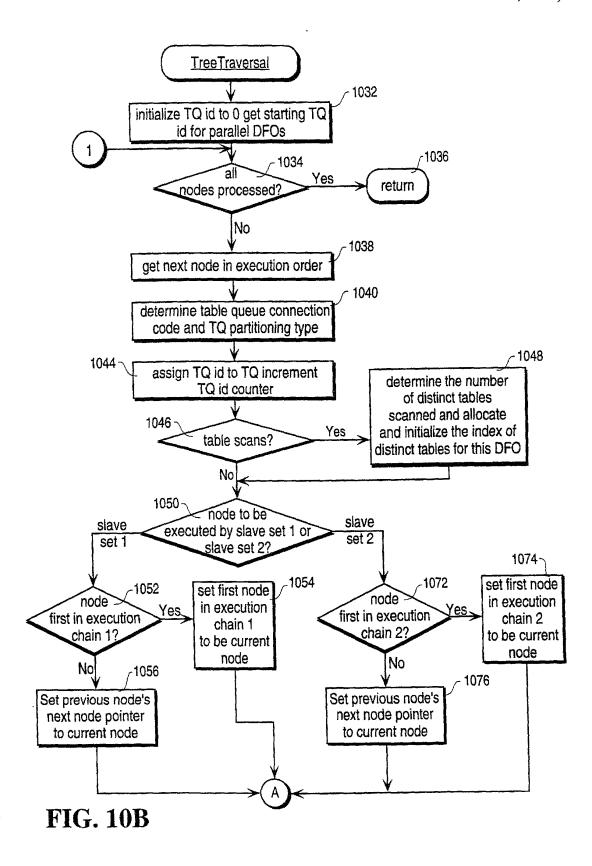
FIG. 9

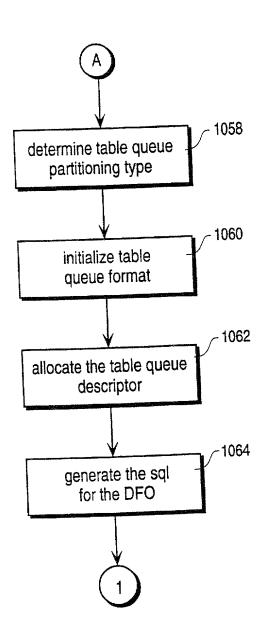
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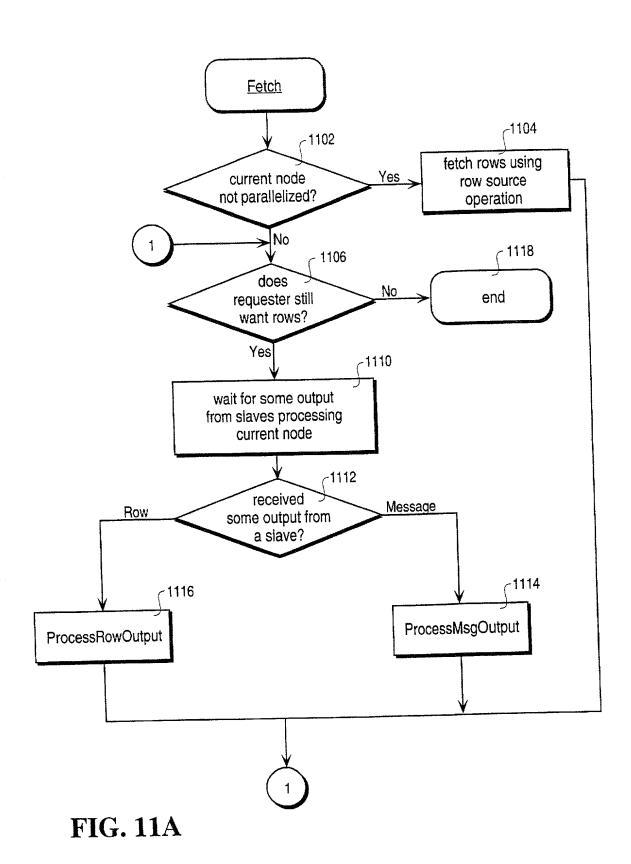
**FIG. 10A** 

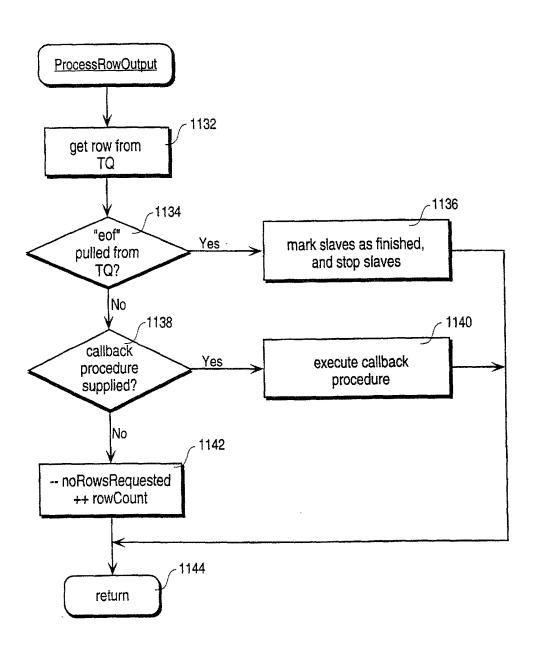
Jan. 5, 1999



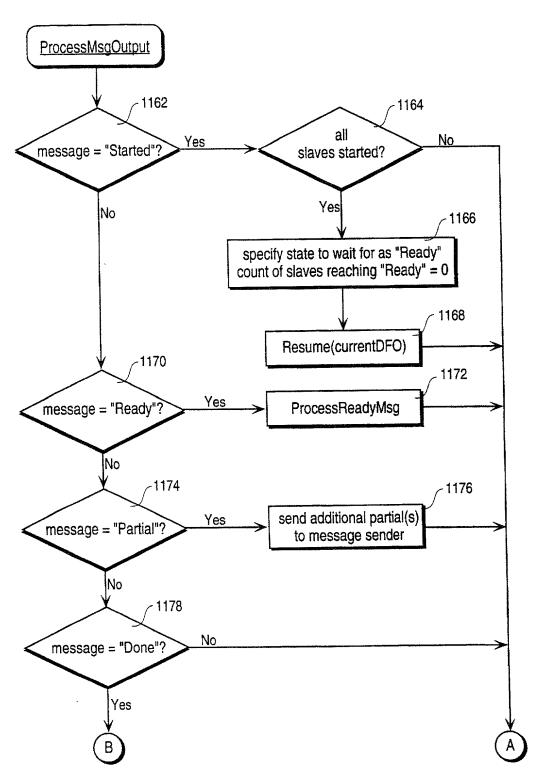


**FIG. 10C** 

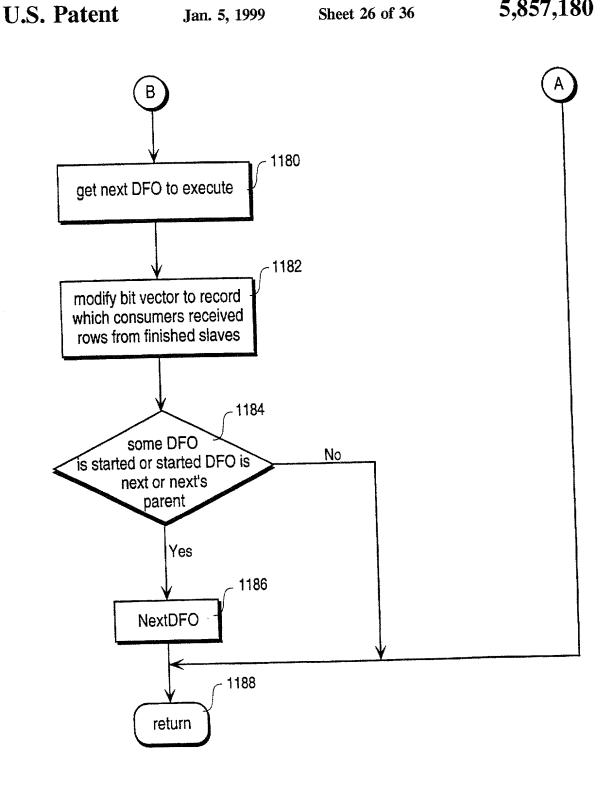




**FIG. 11B** 



**FIG. 11C** 



**FIG. 11D** 



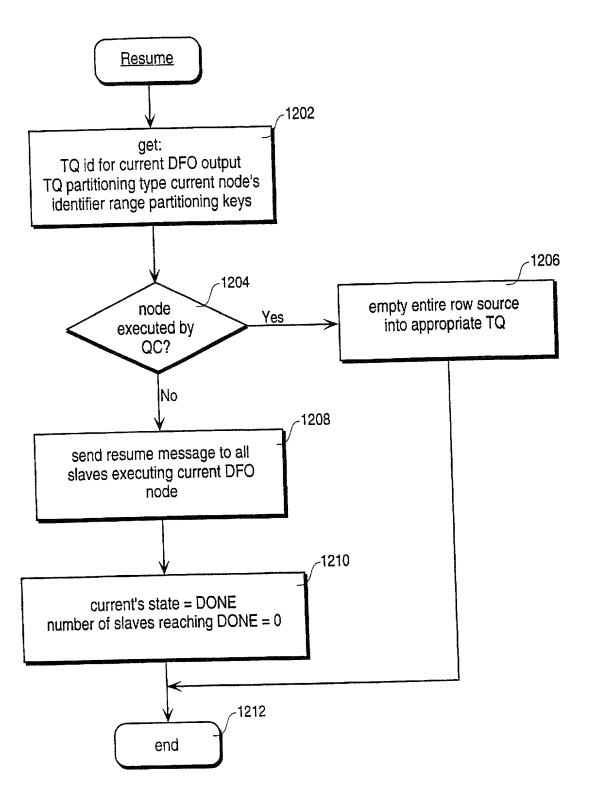
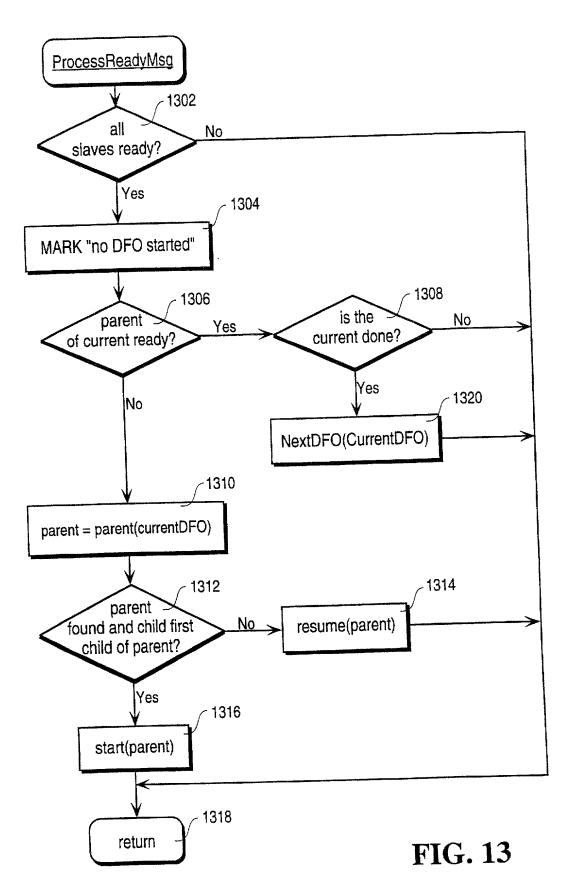
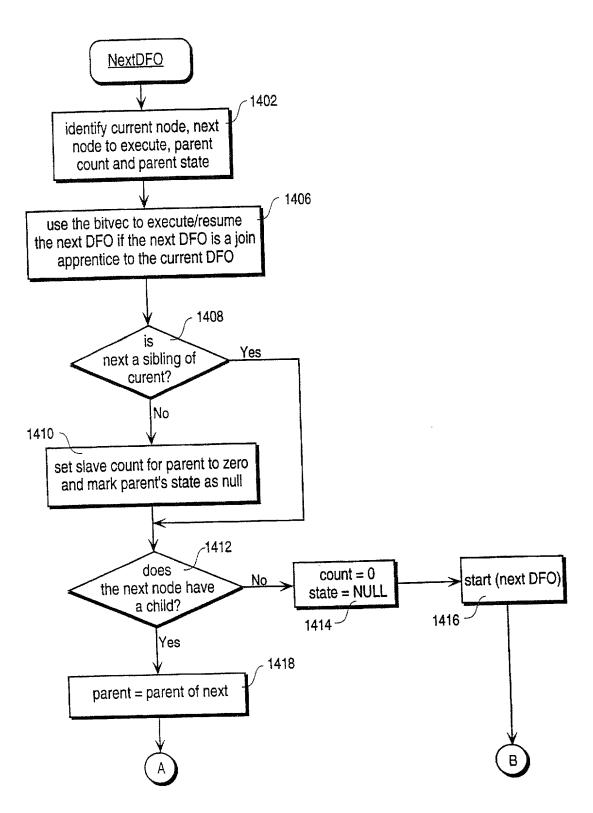
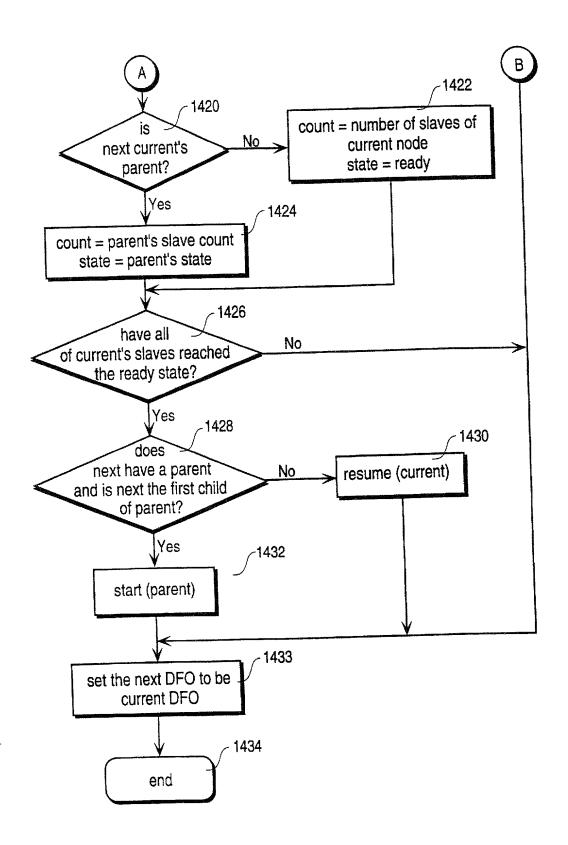


FIG. 12

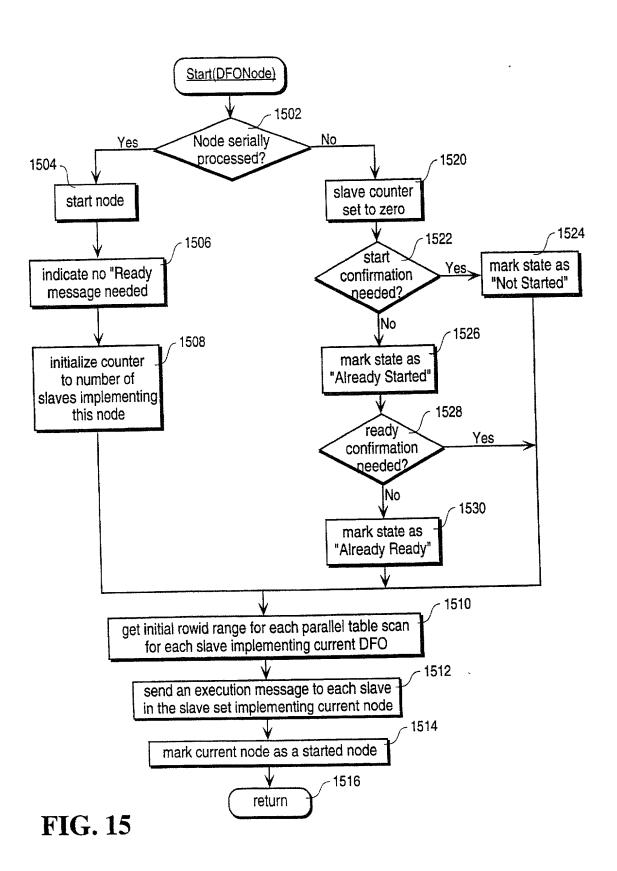


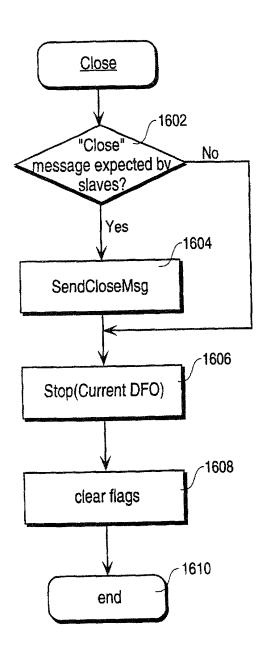


**FIG. 14A** 



**FIG. 14B** 





**FIG. 16** 

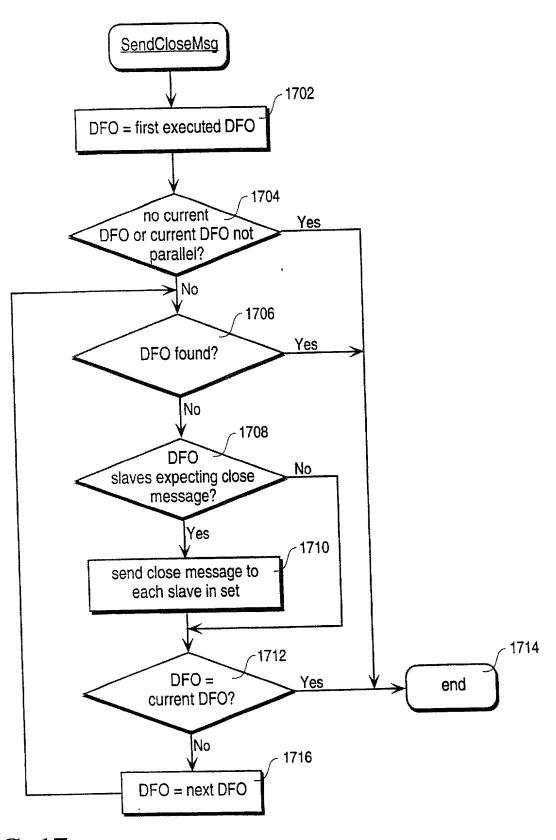
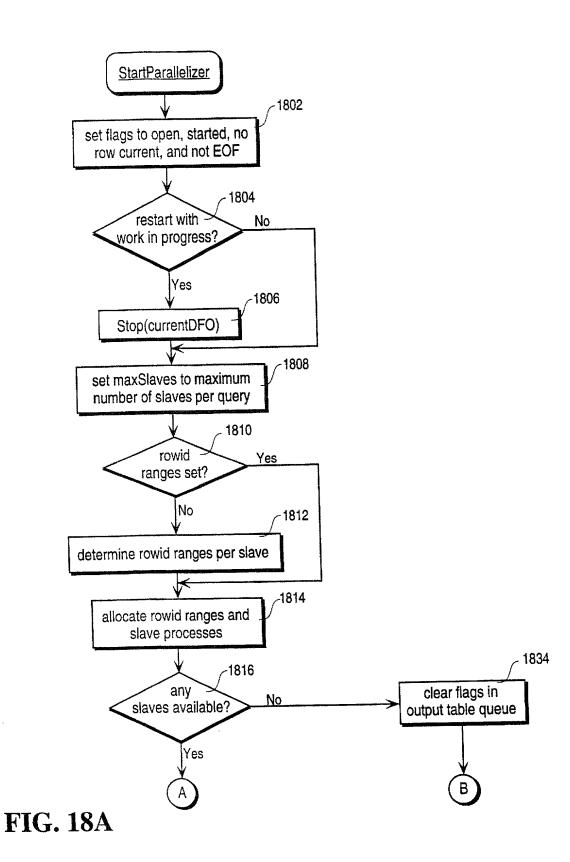
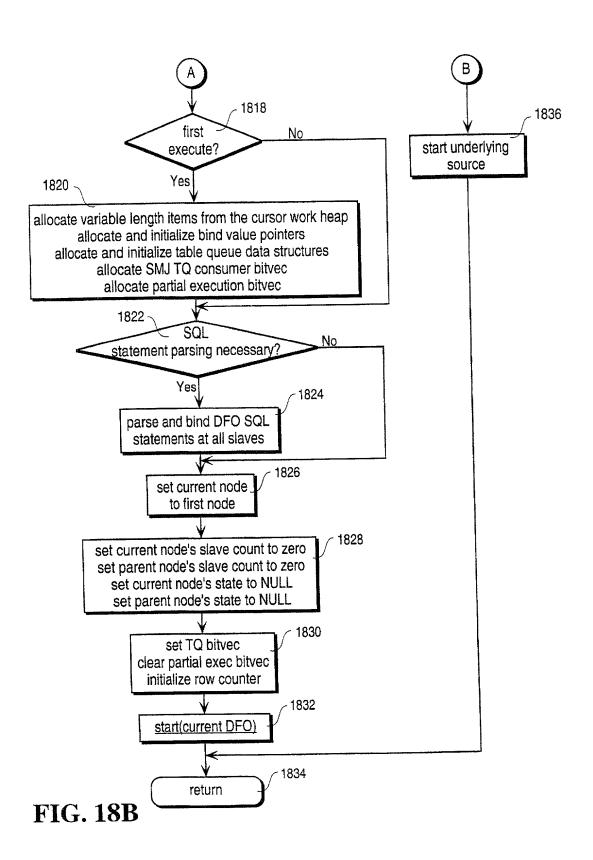
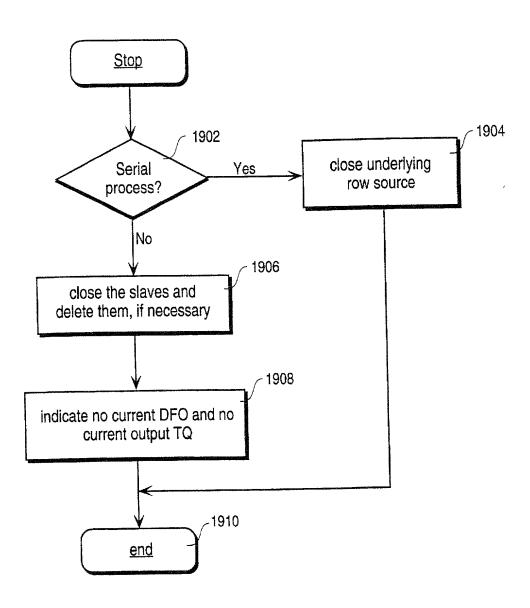


FIG. 17



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FIG. 19